Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-PL-11282-01-01 according to DIN EN ISO/IEC 17025:2018

Valid from: **23.03.2026**

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This annex is part of the Accreditation Certificate D-PL-11282-01-00.

Holder of the Accreditation Certificate:

Institut für Galvano- und Oberflächentechnik Solingen GmbH & Co. KG (IGOS)
Grünewalder Straße 29 - 31, 42657 Solingen

with the location

Institut für Galvano- und Oberflächentechnik Solingen GmbH & Co. KG (IGOS)
Grünewalder Straße 29 - 31, 42657 Solingen

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

Tests in the fields:

Determination of corrosion and media resistance of components using environmental simulation tests; mechanical-technological tests;

Flexible Scope of Accreditation:

Within the indicated test areas the testing laboratory is permitted without being required to prior inform and obtain approval from DAkkS
[Flex A] to use standardised or equivalent test methods listed here with different issue dates.
[Flex B] to have the free choice from standardised or equivalent test methods.

The test methods listed are examples. The testing laboratory has an up-to-date list of all test methods within the flexible scope of accreditation. The list is publicly available on the website of the testing laboratory.

Content

1 Determination of corrosion and media resistance of components using environmental simulation tests [Flex B]

Test type	Measurand / test parameter	Characteristic test methods
Climatic tests	Temperature	DIN EN 60068-2-38
	Humidity	
Media resistance: Changes of properties of plastics in contact with media	Temperature	DIN EN ISO 9227
	Humidity	
Temperature storage	Temperature -40 °C bis +300 °C	DIN EN ISO 2819

AS 2345 2006	Dezincification resistance of copper alloys
ASTM B117-19 2019	Standard Practice for Operating Salt Spray (Fog)
ASTM B368-21 2021	Standard Test Method for Copper-Accelerated Acetic Acid-Salt Spray (Fog) Testing (CASS Test)
ASTM D1735-21 2021	Standard Practice for Testing Water Resistance of Coatings Using Water Fog Apparatus
ASTM G85-19 2019	Standard Practice for Modified Salt Spray (Fog)
DIN 50014 2018-08	Standard atmospheres for conditioning and/or testing – Specifications
DIN 50018 2013-05	Testing in a saturated atmosphere in the presence of sulfur dioxide
DIN 50916-2 2023-07	Testing of copper alloys – Stress corrosion cracking test using ammonia – Part 2: Testing of components
DIN 55635 2019-05	Paints and varnishes – Cyclic corrosion testing of coating systems on materials and components in automotive construction

DIN 50958 2012-12	Electroplated coatings – Modified corrodkote corrosion test (mod. CORR-Test)
DIN EN 248 2003-01 + Correction 1 2017-05	Sanitary tapware – General specification for electrodeposited coatings of Ni-Cr
DIN EN 3665 1997-08	Test methods for paints and varnishes – Filiform corrosion resistance test on aluminium alloys
DIN EN 13523-27 2017-06	Coil coated metals – Test methods – Part 27: Resistance to humid poultice (Cataplasm test)
DIN EN ISO 2143 2018-09	Anodizing of aluminium and its alloys – Estimation of loss of absorptive power of anodic oxidation coatings after sealing – Dye-spot test with prior acid treatment
DIN EN 60068-2-11 2022-10	Environmental testing – Part 2-11: Tests – Test Ka: Salt mist
DIN EN 60068-2-30 2006-06	Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)
DIN EN 60068-2-38 2022-09 + Correction 1 2024-07	Environmental testing – Part 2-38: Tests – Test Z/AD: Composite temperature/humidity cyclic test
DIN EN 60068-2-52 2018-08 + Correction 1 2019-02	Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)
DIN EN ISO 2812-1 2018-03	Paints and varnishes – Determination of resistance to liquids – Part 1: Immersion in liquids other than water
DIN EN ISO 2812-2 2019-03	Paints and varnishes – Determination of resistance to liquids – Part 2: Water immersion method

DIN EN ISO 2812-3 2019-08	Paints and varnishes – Determination of resistance to liquids – Part 3: Method using an absorbent medium
DIN EN ISO 2812-4 2018-03	Paints and varnishes – Determination of resistance to liquids – Part 4: Spotting methods
DIN EN ISO 4541 1995-01	Metallic and other non-organic coatings – Corrodkote corrosion test
DIN EN ISO 4623-2 2016-12	Paints and varnishes – Determination of resistance to filiform corrosion – Part 2: Aluminium substrates
DIN EN ISO 4628-1 2016-07	Paints and varnishes – Evaluation of degradation of coatings – Designation of quantity and size of defects, and of intensity of uniform changes in appearance – Part 1: General introduction and designation system
DIN EN ISO 4628-2 2016-07	Paints and varnishes – Evaluation of degradation of coatings – Designation of quantity and size of defects, and of intensity of uniform changes in appearance – Part 2: Assessment of degree of blistering
DIN EN ISO 4628-3 2025-02	Paints and varnishes – Evaluation of quantity and size of defects, and of intensity of uniform changes in appearance – Part 3: Assessment of degree of rusting
DIN EN ISO 4628-8 2013-03	Paints and varnishes – Evaluation of degradation of coatings – Designation of quantity and size of defects, and of intensity of uniform changes in appearance – Part 8: Assessment of degree of delamination and corrosion around a scribe or other artificial defect
DIN EN ISO 4628-10 2024-06	Paints and varnishes – Evaluation of quantity and size of defects, and of intensity of uniform changes in appearance – Part 10: Assessment of degree of filiform corrosion

DIN EN ISO 6270-2 2018-04	Paints and varnishes – Determination of resistance to humidity – Part 2: Condensation (in-cabinet exposure with heated water reservoir)
DIN EN ISO 6509-1 2014-09	Corrosion of metals and alloys – Determination of dezincification resistance of copper alloys with zinc – Part 1: Test method
DIN EN ISO 6988 1997-03	Metallic and other non-organic coatings – Sulfur dioxide test with general condensation of moisture
DIN EN ISO 9227 2024-10	Corrosion tests in artificial atmospheres – Salt spray tests
DIN EN ISO 10289 2001-04	Methods for corrosion testing of metallic and other inorganic coatings on metallic substrates – Rating of test specimens and manufactured articles subjected to corrosion tests
DIN EN ISO 11997-1 2018-01	Paints and varnishes – Determination of resistance to cyclic corrosion conditions – Part 1: Wet (salt fog)/dry/humid
DIN EN ISO 11997-3 2024-01	Paints and varnishes – Determination of resistance to cyclic corrosion conditions – Part 3: Testing of coating systems on materials and components in automotive construction
DIN EN ISO 12944-6 2018-06	Paints and varnishes – Corrosion protection of steel structures by protective paint systems – Part 6: Laboratory performance test methods
DIN EN ISO 16701 2015-10	Corrosion of metals and alloys – Corrosion in artificial atmosphere – Accelerated corrosion test involving exposure under controlled conditions of humidity cycling and intermittent spraying of a salt solution

DIN EN ISO 17872 2019-12	Paints and varnishes – Guidelines for the introduction of scribe marks through coatings on metallic panels for corrosion testing
DIN EN ISO 22479 2022-08	Corrosion of metals and alloys – Sulfur dioxide test in a humid atmosphere (fixed gas method)
ISO 16750-5 2023-07	Road vehicles – Environmental conditions and testing for electrical and electronic equipment – Part 5: Chemical loads

The following test methods are outside of the flexible accreditation scope:

BMW AA 0055 2021-04	Chemical resistance test of surfaces
BMW AA-0129 2015-04	Cass-Test (Copper Accelerated Acetic Acid Salt Spray test)
BMW AA-0213 2018-02	Condensed water constant climate test
BMW AA-0224 2018-04	Cyclic corrosion test
BMW AA-0324 2018-04	Salt spray test
BMW AA-0326 2017-12	SCAB-Test
BMW GS 90010-1 2023-05	Type of surface protection for metallic materials
BMW GS 90011 2014-02	Coating of parts made of metallic materials by means of organic materials
BMW GS 97017 2023-03	Coatings on plastic parts Electroplated plastic parts, requirements, tests (without: 6.6 Xenontest)
BMW GS 97121-1 2023-06	Inorganic surface coatings Anodized alumiunum parts of motorbikes Requirements and tests

BMW GS 97121-2 2022-02	Inorganic surface coatings – Electroplated chromium coatings for motorcycles – Requirements and tests
BMW PR 209 2008-09	TP Function validation sill finisher
BMW PR 303.6 2020-06	Climate change testing for equipment parts
BMW PR 308.2 2006-04	Climatic test for bonded joints and composite materials on trim parts
BMW QV 64005 2009-05	Corrosion resistance for refrigerant pipes
Bosch N42AP 102 1991-08	Climate tests – Salt spray fog test
Bosch N42AP 226 2010-09	Climate tests – Tightened lifetime – Corrosion test
Daimler Benz DBL 1659 2024-10	Electroplated metal parts with nickel, nickel-chromium or copper-nickel-chromium coatings
Daimler Benz DBL 1650 2025-06	Parts made of ferrous materials with inorganic coating (zinc flake coatings)
Daimler Benz DBL 1651 2025-06	Electrodeposited zinc and zinc alloy coatings for components manufactured from ferrous materials
Daimler Benz DBL 1661 2025-03	Delivery specification – Hot-dip galvanized finished parts – (piece galvanizing)
Daimler Benz DBL 1665 2024-08	Electroplated parts manufactured from plastics with metallic and additional coatings

Daimler Benz DBL 1750 2023-08	Aluminium parts with anodic oxide layers
Daimler Benz DBL 5425 2020-07	Coating / Paintwork of plastic parts in the vehicle exterior
Daimler Benz DBL 7381 2023-12	Organic coating for Metallic parts on the outer side and underside of the vehicle and in the engine compartment
Ford CETP 00.00-L-467 2009-03	Global Laboratory Accelerated Cyclic Corrosion Test
Ford TM 00 00-L-467 2019-01	Global Laboratory Accelerated Cyclic Corrosion Test
GM Appendix F10 2006-11	Materials Engineering Requirements – Anodized Version
GMW 14872 2022-11	Cyclic Corrosion Laboratory Test
Jaguar TPJLR 52.265 2021-12	Laboratory Accelerated Cyclic Corrosion Test
MBN 50494-5 2025-03	Paint test methods – Part 5: Technical-mechanical tests
MBN 10494-6 2021-03	Paint test methods – Part 6: Climatic tests
Nordtest NT MAT 003 2002-05	Assessment of corrosion protection classes for inorganic coatings on steel
Porsche PPV 4017 2011-08	Corrosion test – Modified Climate Change
Renault D17 2028-E 2016-10	Corrosion Test by Automatic Change of phases of salt spray, drying and humidity
SCANIA STD 4319 2017-04	Accelerated corrosion test – Atmospheric corrosion

SCANIA STD 4445 2014-08	Accelerated corrosion test – version II (ACT2)
TESLA TM 5001 2022-04	Cataphoretic Electrocoat MATERIAL SPECIFICATION | VERSION 02
TESLA TP 0000808 2023-05	Cyclic Corrosion Resistance TEST PROCEDURE | VERSION 06
VOLVO STD 423-0014 2015-01	Accelerated corrosion test – Atmospheric corrosion
VOLVO STD 423-0069 2019-10	Accelerated corrosion test, version II (ACT II) – Cyclic atmospheric corrosion test with salt load
VOLVO STD 1027,14 2005-07	Accelerated corrosion test, Atmospheric Corrosion
VOLVO STD 1027,1375 2010-09	Corrosion resistance
Volvo VCS 1027,149 2002-06	Accelerated corrosion test
Volvo VCS 1027,1449 2014-02	Accelerated corrosion test Version II – ACT II
VOLVO VCS 1027,33719 2005-09	Climate ageing (Crack formation) Paints and enamels
VW PV 1067 2007-05	Chrome-plated surfaces; Resistance to calcium chloride containing delcing salt
VW PV 1073 2024-04	Chrome-plated plastic parts – corrosion resistance of chrome surfaces
VW PV 1113 2023-07	AlMgSi wrought alloy Testing the resistance to intercrystalline corrosion
VW PV 1200 2022-11	Vehicle Parts – Testing of Resistance to Environmental Cycle Test (+80/-40) °C
VW PV 1209 2023-09	Condensers, water and charge air coolers made of Aluminium alloys corrosion test (climate corrosion test)

VW PV 1210 2016-02	Automobile body and attachments – Corrosion test
VW PV 2005 2021-06	Vehicle Parts – Testing of Resistance to Environmental Cycle Test
VW TL 182 2020-09	Inorganic protection layer on aluminium parts – surface protection requirement acid-heat-alkaline-resistance
VW TL 211 2023-04	Coating of plastic exterior parts – Requirements
VW TL 212 2021-06	Oxide coatings on aluminium parts – Alkali resistance
VW TL 217 2016-12	Zinc coatings for batch-galvanized components
VW TL 226 2020-10	Paintwork on materials of vehicle interior equipment Table 3
VW TL 227 2022-02	Single-layer paint coating of zinc-coated metal surfaces Surface protection requirements
VW TL 245 2018-08	Non-electrolytically applied zinc flake coatings Surface protection requirements
VW TL 528 2021-02	Chrome-plated plastic parts – Materials requirements according to table 2
VW 96380 2015-07	Corrosion test – Modified Climate Change
SAE J 2334 2016-04	Laboratory Cyclic Corrosion Test
VDA 230-221 2022-09	Leather for steering wheels and leather wrapped steering wheels – Test methods and requirements
VDA 233-102 2013-06	Cyclic corrosion testing of materials and components in automotive construction

VDA 621-412 1985-03	Paint testing – chemical resistance of automobile paints
VDA 621-415 1982-02	Paint tests – testing the corrosion protection of automobile paints with cyclically alternating stress

2 Mechanical-technological tests

2.1 Determination of the adhesive strength of coatings [Flex B]

ASTM D3359-23 2023	Standard Test Methods for Rating Adhesion by Tape Test
DIN EN ISO 1519 2011-04	Paints and varnishes – Bend test (cylindrical mandrel)
DIN EN ISO 2409 2020-12	Paints and varnishes – Cross-cut test
DIN EN ISO 2819 2018-09	Metallic coatings on metallic substrates – Electrodeposited and chemically deposited coatings – Review of methods available for testing adhesion
DIN EN ISO 16276-2 2007-08	Corrosion protection of steel structures by protective paint systems – Assessment of, and acceptance criteria for, the adhesion/cohesion (fracture strength) of a coating – Part 2: Cross-cut testing and X-cut testing
DIN EN ISO 20567-1 2017-07	Paints and varnishes – Determination of stone-chip resistance of coatings – Part 1: Multi-impact testing

2.2 Roughness depth measurements [Flex A]

DIN EN ISO 4287 2010-07	Geometrical Product Specifications (GPS) – Surface texture: Profile method – Terms, definitions and surface texture parameters
DIN EN ISO 4288 1998-04	Geometrical Product Specifications (GPS) – Surface texture: Profile method – Rules and procedures for the assessment of surface texture

2.3 Mechanical-technological testing of metallic samples with and without coatings [Flex A]

ASTM E384-22 2022	Microindentation Hardness of Materials
DIN 50190-3 1979-03	Hardness depth of heat-treated parts – determination of the effective depth of hardening after nitriding
DIN 50969-2 2013-04	Prevention of hydrogen-induced brittle fracture of high-strength steel building elements – Part 2: Test methods
DIN EN 10328 2005-04	Iron and steel – Determination of the conventional depth of hardening after surface heating
DIN EN ISO 2639 2003-04	Determination and verification of the depth of carburized and hardened cases
DIN EN ISO 4516 2002-10	Metallic and other inorganic coatings – Vickers and Knoop microhardness tests
DIN EN ISO 6507-1 2024-01	Metallic materials – Vickers hardness test – Part 1: Test method
DIN EN ISO 18203 2022-07	Steel – Determination of the thickness of surface-hardened layers

2.4 Layer thickness measurements on solid materials [Flex A]

ASTM B487-24 2024	Standard Test Method for Measurement of Metal and Oxide Coating Thickness by Microscopical Examination of Cross Section
DIN EN ISO 1463 2021-08	Metallic and oxide coatings – Measurement of coating thickness - Microscopical method
DIN EN ISO 2178 2016-11	Non-magnetic coatings on magnetic substrates – Measurement of coating thickness – Magnetic method
DIN EN ISO 2360 2017-12	Non-conductive coatings on non-magnetic electrically conductive base metals – Measurement of coating thickness – Amplitude-sensitive eddy-current method
DIN EN ISO 3497 2001-12	Metallic coatings – Measurement of coating thickness – X-ray spectrometric methods

2.5 Abrasion and wear tests on solid materials (Taber-Abraser) [Flex A]

ASTM D4060-25 2025	Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
DIN 53754 1977-06	Testing of plastics – determination of abrasion, abrasive disk method
DIN EN ISO 7784-2 2023-05	Paints and varnishes – Determination of resistance to abrasion – Part 2: Method with abrasive rubber wheels and rotating test specimen

3 Physical-chemical tests

VW PV 1058 2020-03	Chrome-plated surfaces – Determination of the chrome crack network
VW PV 1063 2024-02	Chrome-plated surfaces – Determination of microporosity

abbreviations used:

AS	Australian Standard
ASTM	American Society for Testing and Materials
BMW AA	Bayrische Motoren Werke Work Instruction
BMW PR	Bayrische Motoren Werke Test Guidelines
DBL	Daimler Benz Conditions
DIN	German institute for standardization
EN	European Standard
FIAT MS	FIAT Material Standard
Ford CETP	Ford Corporate Environmental Test Procedure
Ford TM	Ford Test Method
GM	General Motors
GMW	General Motors Worldwide
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
MBN	Mercedes Benz Standards
Porsche PPV	Porsche Test specification
Renault	Renault Work Instruction
SAE	Society of Automotive Engineers
SCANIA	Scania Work Instruction
TESLA TM	TESLA Test Material Standard
TESLA TP	TESLA Test Procedere
TPJLR	Test Procedure – Jaguar Land Rover Limited
VDA	German Association of the Automotive Industry
VOLVO STD	Volvo Group Standard
VOLVO VCS	Volvo Group Volvo Car Standard
VW	Volkswagen
VW PV	Volkswagen Test specification
VW TL	Volkswagen Technical Terms and Conditions